

## **REMARKS**

Applicants respectfully request reconsideration. To further the prosecution of the application, the claims have been amended, and Applicants submit the following remarks. No new matter has been added.

### **I. Interview with the Examiner**

Applicants' representative, Melissa A. Beede, thanks Examiner McKane for her courtesy in granting and conducting a telephone interview held on March 23, 2006. During the interview, Applicants' representative discussed with the Examiner the rejections of the independent claims. The substance of the telephone interview is summarized in the remarks presented herein.

### **II. Rejections of Independent Claim 1**

Independent claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Matschke (U.S. Patent No. 5,498,394) and under 35 U.S.C. §102(e) as being anticipated by Eckhardt (U.S. Patent No. 6,461,568). Claim 1 has been amended to more clearly distinguish over the prior art of record.

As amended, claim 1 recites a sterilizer/disinfector for sterilizing or disinfecting an object, comprising a housing; a light source disposed within the housing; a light seal to block light output from the light source from exiting the housing, wherein the object forms part of the light seal; and a light detector, triggered only when the light detector has detected completion of the light seal to a certain degree, to enable light to be output from the light source.

#### **a. Amendments to Claim 1**

Claim 1 has been amended to recite "a light detector, triggered only when the light detector has detected completion of the light seal to a certain degree." This language is supported in the application as filed, e.g., a page 9, lines 4-17.

b. Rejection over Eckhardt

As discussed during the interview, Eckhardt does not disclose or suggest “a *light* detector, triggered only when the light detector has detected completion of the light seal to a certain degree, to enable light to be output from the light source,” as recited in claim 1. The portions of Eckhardt cited in the Office Action as disclosing an optical device (i.e., col. 3, lines 41-50; col. 4, lines 55-65; and col. 5, lines 44-54) disclose a mating feature of an object (e.g., flange 38 of toothbrush 37) that mates with and thereby disables a lockout device of a sterilizer. Thus, the lockout device of Eckhardt is mechanical in nature, and does not include any light detector. Accordingly, Eckhardt does not disclose a light detector, triggered only when the light detector has detected completion of the light seal to a certain degree, to enable light to be output from the light source, as recited in claim 1.

In view of the foregoing, Eckhardt does not anticipate claim 1. Withdrawal of this rejection is therefore respectfully requested. Claims 2-5 depend from claim 1 and are allowable over Eckhardt for at least the same reasons as the independent claim.

Further, Eckhardt does not render obvious claim 1. As discussed below in connection with claim 11, Eckhardt is disqualified as prior art under 35 U.S.C. §103(c).

c. Rejection over Matschke

Matschke does not disclose or suggest “a light detector, triggered *only* when the light detector has detected completion of the light seal to a certain degree, to enable light to be output from the light source,” as recited in claim 1. As discussed during the interview, the photo-electric sensor and momentary switch 24 of Matschke detects whether the light path 8 has been interrupted by an opaque object. Completion of a light seal to a certain degree is not required for the photo-electric sensor and momentary switch 24 to be triggered. For example, placing an opaque object (e.g., a mug) inside the apparatus of Matschke will interrupt the light path 8 and trigger momentary switch 24, but will have no effect on the light seal. To clarify this distinction between the photo-electric sensor and momentary switch 24 of Matschke and the light detector of claim 1, claim 1 has been amended to recite that the light detector is triggered “only” when the light detector has detected completion of the light seal to a certain degree, as suggested by the Examiner. The

Examiner indicated that such language would distinguish over Matschke.

In view of the foregoing, Matschke does not anticipate claim 1. Withdrawal of this rejection is therefore respectfully requested. Claims 2-5 depend from claim 1 and are allowable over Matschke for at least the same reasons as the independent claim.

### III. Rejection of Independent Claim 11

Independent claim 11 was rejected under 35 U.S.C. §103 as being obvious over Bourque (U.S. Patent No. 5,127,521) in view of Eckhardt (U.S. Patent No. 6,461,568). This rejection is respectfully traversed.

Claim 11 recites a sterilizer/disinfector, comprising: a housing; a flash lamp disposed within the housing; and one or more vanes each attached to the housing at a pivot point and rotatable about the pivot point, for actuating the flash lamp and blocking light emitted by the flash lamp from exiting the housing.

#### a. Statement Concerning Common Ownership

The present application and Eckhardt were, at the time the invention of the present application was made, owned by or subject to an obligation of assignment to UV-Solutions, Inc. Furthermore, Eckhardt qualifies as prior art to the present application only under 35 U.S.C. 102(e). Accordingly, Eckhardt is disqualified as prior art under 35 U.S.C. §103(c).

In view of the foregoing, withdrawal of this rejection is respectfully requested. Claim 12 depends from claim 11 and is allowable for at least the same reasons as the independent claim.

### IV. Rejection of Independent Claim 18

Independent claim 18 was rejected under 35 U.S.C. §102(b) as being anticipated by Bourque (U.S. Patent No. 5,127,521). Claim 18 has been amended to clearly distinguish over the cited reference.

As amended, claim 18 recites a sterilizer/disinfector for sterilizing or disinfecting an object,

comprising a housing and two or more vanes pivotally mounted to the housing, wherein the vanes are constructed and arranged to interface to enclose a portion of the object during sterilization or disinfection.

During the interview, Applicants' representative proposed amending claim 18 to recite that the vanes are "constructed and arranged" to interface to enclose a portion of the object during sterilization or disinfection to clearly distinguish over Bourque, which does not teach or suggest that any of the door units 50 of the toothbrush holder unit are constructed and arranged to interface to enclose a portion of a toothbrush. The Examiner agreed that the proposed language distinguishes over Bourque.

In view of the foregoing, claim 18 is not anticipated by Bourque. Withdrawal of this rejection is therefore respectfully requested.

V. Rejection of Independent Claim 23

Independent claim 23 was rejected under 35 U.S.C. §102(b) as being anticipated by Bourque (U.S. Patent No. 5,127,521). Claim 23 has been amended to clearly distinguish over Bourque.

As amended, claim 23 recites a device comprising: a housing having an opening for at least partially receiving an object; at least one movable member, attached to the housing, the at least one movable member movable between an open position and a closed position; an ultraviolet light source within the housing; and a detector that detects at least one of: (1) a degree of light sealing of the housing caused at least in part by the movable member, (2) the movable member being in the closed position, and (3) an object being located in a certain position at least partially within the housing; wherein, when the object is placed at least partially within the housing, the movable member is in the closed position, and the detector detects the at least one of (1) a degree of light sealing of the housing caused at least in part by the movable member, (2) the movable member being in the closed position, and (3) an object being located in a certain position at least partially within the housing, then the ultraviolet light source emits ultraviolet radiation to sterilize or disinfect the object; and wherein the movable member is constructed and arranged to move to the closed position automatically upon placing an object at least partially within the opening of the housing.

Claim 23 has been amended to include subject matter similar to that of claim 24 as previously pending. Accordingly, the rejection of claim 24 is discussed below.

Claim 24 was rejected as being obvious over Bourque in view of Kawamura (U.S. Patent No. 4,877,967). As discussed with the Examiner during the interview, there is no motivation to combine Bourque and Kawamura in the manner suggested. Kawamura discloses using coil springs 15 so that light interrupting doors 5, 6 pushed open by a package 1 may be individually closed by restoring forces of the associated coil springs 15. The light interrupting doors are located at an entrance and an exit of a dark room to interrupt external light from entering the dark room.

A person of ordinary skill in the art would not have been motivated to replace the door units 50 of Bourque with the light interrupting doors 5, 6 of Kawamura because, among other reasons, there is no need to exclude light from the interior of the toothbrush holder unit of Bourque. Further, although it may be desirable in Bourque to minimize the light from escaping from the *interior* of the toothbrush holder unit, the doors 5, 6 of Kawamura would not advance this objective because switch 82 ensures that the ultraviolet light of Bourque is never activated when the door units 50 are opened.

The Examiner agreed with the foregoing discussion of the lack of motivation to combine Bourque and Kawamura. Accordingly, withdrawal of this rejection is respectfully requested. Claim 24 depends from claim 23 and is allowable for at least the same reasons as the independent claim.

#### VI. Rejection of Independent Claim 25

Independent claim 25 was rejected under 35 U.S.C. §102(b) as being anticipated by Matschke (U.S. Patent No. 5,498,394) and Bourque (U.S. Patent No. 5,127,521).

As amended, claim 25 recites a device comprising a housing having an opening for at least partially receiving an object; at least one movable member movable between an open position and a closed position, the movable member being attached to the housing in both the open position and the closed position; an ultraviolet light source within the housing; and an actuator that prevents the ultraviolet light source from emitting ultraviolet radiation until at least one detector that detects an object is placed at least partially within the opening of the housing and the movable member is in its closed position.

a. Amendments to Claim 25

Claim 25 has been amended to recite at least one movable member movable between an open position and a closed position, “the movable member being attached to the housing in both the open position and the closed position.” This language is supported in the application as filed, e.g., at page 14, lines 23-28 and Figs. 15-17.

Claim 25 has further been amended to recite an actuator that prevents the ultraviolet light source from emitting ultraviolet radiation until “at least one detector detects that” an object is placed at least partially within the opening of the housing and the movable member is in its closed position. This language is supported in the application as filed, e.g., at page 14, lines 26-28, and at page 18, lines 4-7 and 18-21.

b. Rejection over Matschke

As discussed during the interview, the upper member 11 of Matschke is not “attached to the housing in both the open position and the closed position,” as now recited in claim 25. Specifically, the upper member 11 is not attached to the lower member 12 in the open position. The Examiner agreed that Matschke does not show this feature.

Further, Matschke does not teach or suggest “an actuator that prevents an ultraviolet light source from emitting ultraviolet radiation until at least one detector detects that... the movable member is in its closed position,” as now recited in claim 25. The photo-electric sensor and momentary switch 24 of Matschke detects only whether the light path 8 is interrupted, and not whether the upper member 11 is in a closed position. Indeed, the upper member 11 need not be in a closed position for the light path 8 to be interrupted. Further, Matschke does not disclose or suggest any other detector that serves this function.

In view of the foregoing, Matschke does not teach or suggest the device of claim 25. Withdrawal of this rejection is therefore respectfully requested.

c. Rejection over Bourque

Bourque does not teach or suggest “an actuator that prevents an ultraviolet light source from emitting ultraviolet radiation until at least one detector detects that an object is placed at least

partially within the opening of the housing and the movable member is in its closed position,” as now recited in claim 25. As discussed during the interview, the toothbrush holder unit of Bourque does not include any detector that detects whether a toothbrush is placed within the toothbrush holder unit. The Examiner agreed that Bourque does not show this feature.

Accordingly, Bourque does not teach or suggest the device of claim 25. Withdrawal of this rejection is therefore respectfully requested.

## VII. Rejections of Independent Claim 26

Independent claim 26 was rejected under 35 U.S.C. §102(e) as being anticipated by Eckhardt (U.S. Patent No. 6,461,568).

As amended, claim 26 recites a sterilizer/disinfector for sterilizing or disinfecting an object, comprising a housing; an ultraviolet flash light source disposed within the housing; and a lockout mechanism comprising an optical sensor located within the housing, wherein the lockout mechanism is adapted to prevent light from being output from the ultraviolet flash light source unless completion of a light seal to a certain degree has been detected.

### a. Amendments to Claim 26

Claim 26 has been amended to recite an optical “sensor.” This language is supported in the application as filed, e.g., at page 14, lines 27-28.

### b. Rejection over Eckhardt

As discussed in connection with claim 1, the portions of Eckhardt cited in the Office Action as disclosing an optical device (i.e., col. 3, lines 41-50; col. 4, lines 55-65; and col. 5, lines 44-54) disclose a mating feature of an object (e.g., flange 38 of toothbrush 37) that mates with and thereby disables a lockout device of a sterilizer. Thus, the lockout device of Eckhardt is mechanical in nature, and does not include any optical sensor. Accordingly, Eckhardt does not disclose a lockout mechanism comprising an optical sensor located within the housing, as recited in claim 26.

In view of the foregoing, Eckhardt does not anticipate claim 26. Withdrawal of this rejection is therefore respectfully requested. Claim 27 depends from claim 26 and is allowable for at least the same reasons as the independent claim.

Further, Eckhardt does not render obvious claim 26. As discussed below in connection with claim 11, Eckhardt is disqualified as prior art under 35 U.S.C. §103(c).

#### VIII. New Claims

Claims 48-51 have been added to further define Applicants' contribution to the art. These claims are believed to clearly distinguish over the art of record. No new matter has been added.

Claim 48 recites a sterilizer/disinfector for sterilizing or disinfecting an object, comprising: a housing having an interior and an exterior; an ultraviolet light source disposed within the housing; a light seal to block light output from the ultraviolet light source from exiting the housing, wherein the object forms part of the light seal; a light detector, constructed and arranged to detect a level of external light that has entered the housing from the exterior; and an actuator to enable light to be output from the ultraviolet light source, the actuator being triggered, at least in part, by the level of external light detected by the light detector. None of the prior art of record is believed to disclose or suggest a light detector, constructed and arranged to detect a level of external light that has entered a housing from the exterior, and an actuator to enable light to be output from an ultraviolet light source, the actuator being triggered, at least in part, by the level of external light detected by the light detector, as recited in claim 48. Specifically, the photo-electric sensor and momentary switch 24 of Matschke detects whether light path 8 has been interrupted, not a level of an *external* light. Claim 48 is supported in the application as filed, e.g., at page 2, 16-21 and page 9, lines 4-17.

Claim 49 depends from claim 25 and is allowable at least on the basis of its dependency. Claim 49 is supported in the application as filed, e.g., at page 14, lines 23-25.

Claims 50-51 depend from claim 11 and are allowable at least on the basis of their dependency. Claims 50-51 are supported in the application as filed, e.g., at Figs. 1-7 and page 8, lines 12-26.



**CONCLUSION**

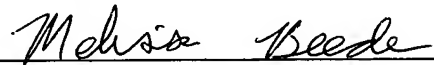
This application is believed to be in condition for allowance. If the Examiner does not believe the application is in condition for allowance, she is requested to call the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

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